

The Invention Claimed Is:

1. A storage system for handling data accesses received through a shared network directed to content contained in the storage system, comprising:
at least one content server connected to the shared network to receive the data accesses and to respond to the data accesses by sending the
5 content through the shared network;
a storage network connected to the content server;
at least one storage device connected to the storage network, containing current data for the content and from which the content server reads the current data for the content through the storage network; and
10 a production server connected to the storage network and with which new data is developed to update the current data for the content and which sends the new data through the storage network to the storage device, bypassing the content server.
2. A storage system as defined in claim 1 further comprising:
a plurality of the content servers, each connected to the storage network; and
a plurality of the storage devices, each connected to the storage
5 network and corresponding to one of the content servers and containing duplicate copies of the current data for the content;
and wherein the production server sends the new data to a first one of the storage devices through the storage network, which sends the new data to other ones of the storage devices through the storage network.
3. A storage system as defined in claim 2 further comprising:
snapshot volumes of the current data for the content contained on each of the storage devices;
and wherein the content servers read the current data for the content
5 from the snapshot volumes on the corresponding storage devices while the production server sends the new data to the first storage device and the first storage device sends the new data to the other storage devices.

4. A storage system as defined in claim 1 further comprising:
a local network connected between the shared network and the
content server;

5 and wherein the production server bypasses the local network when
sending the new data through the storage network to the storage device.

5. A method of managing a storage system for handling data accesses
from a shared network directed to content of the storage system, the storage
system including a content server, a production server and a storage device
connected to each other by a storage network, the storage device containing
5 current data for the content, the content server servicing the data accesses by
reading the current data for the content from the storage device across the storage
network and sending the current data through the shared network, the production
server being used by an administrator to develop new data to update the current
data for the content, comprising the steps of:

10 servicing the data accesses from the current data;
transmitting the new data from the production server through the
storage network to the storage device, bypassing the content server;
replacing the current data on the storage device with the new data;
and

15 servicing the data accesses from the new data.

6. A method as defined in claim 5, wherein the storage system includes
a plurality of the content servers and a plurality of the storage devices, each of the
storage devices corresponding to one of the content servers and containing a
duplicate copy of the current data, comprising the further steps of:

5 distributing the data accesses to the content servers;
servicing the data accesses by the content servers from the current
data contained on the corresponding storage devices;
transmitting the new data from the production server through the
storage network to a first one of the storage devices;

- 10 replicating the new data from the first storage device through the
storage network to other ones of the storage devices;
replacing the current data on each of the storage devices with the
new data; and
servicing the data accesses by the content servers from the new data
15 contained on the corresponding storage devices.
7. A method as defined in claim 6 comprising the further steps of:
forming a first snapshot volume of the current data in the first storage
device before transmitting the new data from the production server to the first
storage device;
5 forming other snapshot volumes of the current data in each of the
other storage devices before replicating the new data from the first storage device
to the other storage devices; and
servicing the data accesses by the content servers from the first and
other snapshot volumes of the current data contained on the corresponding storage
10 devices while transmitting the new data from the production server to the first
storage device and replicating the new data from the first storage device to the
other storage devices.
8. A method as defined in claim 7 comprising the further step of:
sending a command, before forming the first and other snapshot
volumes, from the production server through the storage network, bypassing the
content servers, to the storage devices instructing the storage devices to form the
5 first and other snapshot volumes of the current data.
9. A method as defined in claim 8 comprising the further step of:
sending a command, after forming the first and other snapshot
volumes, from the production server through the local network to the content
servers instructing the content servers to service the data accesses from the first
5 and other snapshot volumes of the current data.
10. A method as defined in claim 9 comprising the further step of:

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5 sending a command from the production server through the local network to the content servers instructing the content servers to service the data accesses from the new data on the storage devices after transmitting the new data from the production server to the first storage device and replicating the new data from the first storage device to the other storage devices.

11. A method as defined in claim 5, wherein the storage system also includes a local network connected between the shared network and the content server, comprising the further step of:

5 transmitting the new data from the production server through the storage network to the storage device, bypassing the local network.

12. A method of developing and updating content on a storage system, the storage system being for handling data accesses from a shared network directed to the content, the storage system including a content server, a production server and a storage device connected to each other by a storage network, the storage device containing current data for the content in a primary volume, the content server servicing the data accesses by reading the current data for the content from the primary volume on the storage device across the storage network and sending the current data through the shared network, the production server being used by an administrator to develop new data to update the current data for the content, comprising the steps of:

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instructing the storage device to form a snapshot volume of the primary volume containing the current data for the content;

instructing the content server to service the data accesses from the current data in the snapshot volume;

15 developing the new data for the content;

using the primary volume as storage during the developing to simultaneously update the current data in the primary volume with the new data; and

20 instructing the content server to service the data accesses from the updated data in the primary volume after completing the developing.

13. A method as defined in claim 12, wherein the storage device is a first storage device, the storage system includes a plurality of the content servers and a plurality of the storage devices, each of the storage devices corresponds to one of the content servers and contains a duplicate copy of the current data, comprising
- 5 the further steps of:
- replicating the new data from the first storage device through the storage network to other ones of the storage devices;
 - updating the current data on the other storage devices with the new data; and
- 10 servicing the data accesses by the content servers from the new data contained on the corresponding storage devices.

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